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ANNUAL OPERATIONS AND PROGRESS REPORT

DIVISION OF OIL
GAS & MINING

From Month/Year January, 1985
to Month/Year December, 1985

(To be submitted for each mining operation at the end of each calendar year to the Division at this address:)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
(801) 538-5340

OPERATOR: St. George Mining Corporation MINE NAME: Apex Mine

ADDRESS: P.O. Box 1892, St. George, Utah 84770

PERMIT NUMBER AND DATE OF PERMIT: Act/053/004 August 24, 1984

REPRESENTATIVE: R. L. Renaud, General Manager

SECTION(S): 6/7 & 1/2 TOWNSHIP(S): 43 RANGE(S): 178 18 West

MINERAL(S) MINED: Gallium/Germanium

STATE AND/OR FEDERAL MINERAL LEASE NUMBERS: None

SPECIAL USE PERMITS AND/OR RIGHTS-OF-WAY: None

Section 40-8-15 and Rule M-8 of the Utah Mined Land Reclamation Act, requires each operator to include with this report an up-dated map and plan prepared in accordance with Rule M-3, as outlined in the requirements for annual report maps in Appendix I, providing a detailed status of all mining and reclamation activities which have occurred during the past year.

The report should include:

MINING:

(a) Tabulation of acreage disturbed (by pits, roads, facilities, etc.) during the report period with illustration on a current map.

<u>Disturbance</u>	<u>Acreage</u>
Pit	<u>Nil</u>
Roads	<u>Nil</u>
Facilities	<u>Nil</u>
Waste Dumps	<u>Nil</u>
Other	<u>Nil</u>

(b) Tabulation of acreage affected to date (by years).

<u>Date by Year</u>	<u>Acreage (Total)</u>
1975	<u>Nil</u>
1976	<u>Nil</u>
1977	<u>Nil</u>
1978	<u>Nil</u>
1979	<u>Nil</u>
1980	<u>Nil</u>
1981	<u>Nil</u>
1982	<u>Nil</u>
1983	<u>Nil</u>
1984	<u>0.4</u>

(c) Tabulation of all topsoil (new) stockpile volumes (see chart below) and date of stockpiling.

SOIL TABULATION CHART

Area Affected (in mining sequence) (If more space is needed, please attach.)	<u>Area</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>etc.</u>
Acreage of Area	<u>Nil</u>			
Depth of Topsoil Removal (inches)	<u>Nil</u>			
Depth of Topsoil Replacement (inches)*	<u>Nil</u>			
Estimate of Topsoil Volume Salvaged (yd ³ or ac ft)	<u>Nil</u>			
Volume Actually Salvaged (yd ³ or ac ft)	<u>Nil</u>			
Volume Required for Reclamation (yd ³ or ac ft)	<u>Nil</u>			
Surplus or Deficit Volume (yd ³ or ac ft)	<u>N/A</u>			
Storage Status (short- or long-term)	<u>N/A</u>			

Upper dump material was recovered, screened and trucked to the plant. This work was completed in May, 1985.

Soil Tabulation Chart (continued)

Area Affected (in mining sequence)	Area			
	1	2	3	etc.
Storage Location	N/A			
Area Where Soil Has Been Used (if not stored)	N/A			
Running Total (all stockpiles) (yd ³ or ac ft)	Nil			
Short-term	Nil			
Long-term	Nil			

*Of previously stripped area recently reclaimed.

(d) Tabulation of all (newly removed) out-of-pit spoil volumes, date of placement and illustration on a map.

<u>Area</u>	<u>Date</u>	<u>Acreage</u>
Nil		

(e) Tabulation of quantity of commodity mined.

	<u>Commodity</u>	<u>Tonnage</u>
(Mined)	Gallium/Germanium Ore	1120 Tons
(Milled)		

(f) Description of any new construction during the report period with illustration on a map, including, but not limited to:

1. Buildings and support facilities.

A crushing/screening plant and a cement silo and gravel hopper were erected during the year. A Changehouse was under construction at the end of the year.

2. Roads.

The road to the Apex Mine was upgraded and gravelled. No new roads were developed in 1985.

3. Diversion ditches, collector ditches, interceptor ditches, etc.

Nil

4. Culverts.

Nil

5. Sediment ponds, containment ponds.

Nil

6. Monitoring sites (vegetative, air quality, surface subsidence, surface water or ground water, etc.).

Nil

7. Topsoil stockpiles.

Nil

(g) Description of any environmental problem areas with a proposed plan for mitigation and illustration on a map, including, but not limited to:

1. Pit stability problems.

Nil

2. Subsidence.

Nil

3. Accidental water discharge, dam failure, etc.
Nil

4. Slumping, sliding or erosion.
Nil

5. Revegetation problem areas.
Nil

6. Existence and location of unsuitable (toxic) overburden.
Nil

RECLAMATION:

(a) Tabulation of the acreage reclaimed during the report period with illustration on a map, distinguishing between:

1. Backfilled, graded and contoured areas.

	<u>Area</u>	<u>Acreage</u>
Nil		

2. Topsoiled areas.

	<u>Area</u>	<u>Acreage</u>
Nil		

3. Seeded areas.

<u>Area</u>	<u>Acreage</u>
Nil	

4. Reseeded areas (areas previously seeded, then seeded again).

<u>Area</u>	<u>Acreage</u>
Nil	

(b) Tabulation of total acreage reclaimed (seeded with permanent seed mix) to date by years with illustration on an updated map:

<u>Year</u>	<u>Acreage</u>
1975	Nil
1976	Nil
1977	Nil
1978	Nil
1979	Nil
1980	Nil
1981	Nil
1982	Nil
1983	Nil
1984	Nil

(c) Description of the reclamation procedures used during the report period, including:

1. Average depth of topsoil applied.
N/A

2. Type of seed (species) used for seeding during the report period.
N/A

3. Date of seeding during the report period.

Spring n/a

Fall n/a

4. Seeding procedures used.

(Hand broadcast or drilled or any other).
n/a

5. Rate of seed application.

Pounds Per Acre of Pure Live Seed (PLS) (if varied, please explain)
n/a

6. Type and rate of fertilizer applied.
n/a

7. Type and rate of mulch applied.
n/a

8. Rate of irrigation water applied, if any. Please describe any
type of sprinkling, or water applied (water truck, etc.).
n/a

9. Revegetation test plot information.

(Cover, density, productivity, etc.)
n/a

10. Soil analysis results.
n/a

(d) Description of results of previous revegetation efforts, including:
(This should be done as applicable.)

1. Types (species) of seed that have germinated and are growing.
n/a

2. Types (species) of seed that are not growing successfully.
n/a

3. Areas experiencing problems with weeds and weed types.
n/a

4. Significant erosional problems.
n/a

5. Areas of unsuitable overburden on the surface as related to
revegetation failure.
n/a

6. Procedures used or proposed to correct these problems.
n/a

7. Acreage and dates of release (upon inspection by the State) of revegetated areas.

<u>Area</u>	<u>Date</u>	<u>Acreage</u>
n/a		

8. Results of soil analysis.

n/a

(e) Summarization of the reclamation costs incurred during the report period, including itemized costs for each operation (i.e., grading, topsoil replacement, seeding, etc.) and for each type of disturbance (i.e., spoil, haul roads, facilities removal, etc.) on a per acre basis.

	<u>Acres</u>	<u>Cost/Acre</u>
1. Grading		
2. Backfilling		
3. Contouring		
4. Topsoil Replacement		
5. Seeding		
A. Seedbed Preparation		
B. Mulch		
C. Fertilizer		
D. Seed		
6. Other		

BOND INFORMATION:

- A. An updated bond estimate should be included, if required in the Division's approval of the Mining and Reclamation Plan (MRP) or if changes to the MRP have occurred, including a detailed itemization of actual/estimated reclamation costs as outlined in the RECLAMATION section above. The date of the release of revegetated areas from further responsibility for a partial bond release, if applicable, should also be included.

	<u>Amount</u>	<u>Type</u>	<u>Date Posted</u>
Present Bond	<u>\$54,389.</u>	<u>Reclamation Bond</u>	<u>August 2, 1984</u>

Increased disturbance, if any:

Nil

Increased Bond Amount (attached reclamation estimate).

B. Bond release.

<u>Acres</u>	<u>Bond Amount Released</u>	<u>Date</u>
n/a	n/a	

ADDITIONAL INFORMATION:

Supply any additional information as requested by the Division related to:

- (a) Permit stipulations (status).
- (b) Other special conditions (status).

APPENDIX I

ANNUAL REPORT MAPS

1. Maps must be clear and legible contour maps or recent aerial photos. The scale should be 1 inch = 500 feet to adequately show topographic features.
2. Map sheets should be of a reasonable size, not to exceed 48 inches on a side.
3. Maps must have a title block with:
 - A. Map title.
 - B. Name and address of permittee.
 - C. Permit and amendment numbers.
 - D. Annual report period.
 - E. Scale, north arrow, contour interval, date of photography, etc.
4. All maps must show:
 - A. Legal subdivisions.
 - B. Permit area boundary clearly shown and labelled.
 - C. Amendment areas clearly shown and labelled.
 - D. Contour features.
5. The following features should all be clearly identified:
 - A. Topsoil stockpiles (numbered and with volumes).
 - B. Settling ponds and sediment control structures.
 - C. Haul roads.
 - D. Pits identified by location, name, number, etc.
 - E. Ramps (numbered).
 - F. Out-of-pit spoil dumps.
 - G. All waste disposal sites including, but not limited to:
 1. Landfill sites.
 2. Carbonaceous waste dumps.
 - H. Diversion ditches.
 - I. Monitoring sites.
6. All areas to be affected by mining and reclamation in the coming year should be outlined and labelled.